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Volume 8, Issue 4

April 28, 2015

IDAHO BARLEY NEWSBRIEF

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Idaho barley check-off dollars at work... IBC collaborates with industry to expand barley food uses -

We are currently working with Highland Specialty Grains and Ardent Mills on sponsoring a Food Barley Technical Symposium targeted at domestic cereal processors and end users.

This Food Barley Technical Symposium will demonstrate the versatility and benefits of incorporating barley fiber into traditional cereal products. The course will be conducted by cereal scientists at the Wheat Marketing Center in Portland, OR, where the IBC hosted similar workshops for potential food barley customers from Asia and Latin America in 2012.

Barley Yellow Dwarf Virus Epidemic in Winter Cereals across southern & eastern Idaho

Contributed by Dr. Juliet Marshall, University of Idaho Associate Professor, Cereals Agronomy/Pathology, Idaho Falls, 208-529-8376, jmarshall@uidaho.edu

In early March we started seeing symptoms of BYDV in winter cereal fields and have since confirmed a widespread epidemic, stretching from eastern Oregon through the Magic Valley into eastern Idaho and Utah. Due to warmer and drier than normal conditions in late winter, winter cereals broke dormancy about three to four weeks earlier than "average." In most south-central Idaho areas, 85-95% of our winter wheat fields are showing 95-100% incidence. Some are severe, and growers are removing (spraying and plowing) some of these fields and replanting spring grain or dry beans. Eastern Idaho fields are showing less severe effects. Decisions to destroy fields should be made on a case-by-case basis.

Contributing factors include unusual rains last August, high populations of aphids in the fall (especially in the corn that was green chopped), a long fall, and we have had one of the warmest winters / earliest springs on record. Full rates of insecticidal seed treatments have been ineffective due to a long warm fall and high aphid populations. We also have severe drought conditions, which makes mitigation more difficult and damage potentially more severe. **-More on pg. 3 -**).

Barley Agronomist Corner

Dr. Christopher W. Rogers, University of Idaho Barley Research Agronomist , Aberdeen Research & Center

Spring planting has wrapped up for many of you with a few areas with fields left to plant. We are ahead of the average year in terms of planting in most places due to the warm weather. Additionally, precipitation has been limited in many areas, and as such, irrigation is critical for stand development. Early season field scouting for disease and weed management will also play an important role in maximizing your returns. The UI Barley Agronomy program has been busy finishing field planting in Aberdeen, Kimberly, and Idaho Falls for our studies focused on cultural management practices with multiple varieties. With these studies, we hope to improve our understanding of nutrient and water management practices, leading to improved profitability and overall sustainability of Idaho's barley crop in the long term. A new University of Idaho Extension Publication (CIS1217, Spring Barley Quick Facts, Southern Idaho, 2015 available online at the following link http://www.cals.uidaho.edu/edComm/pdf/CIS/CIS1217.pdf) has recently been published by myself and other scientists from the University of Idaho. In this publication, we provide key facts and information concerning management practices that we hope you will find valuable as a quick reference for questions you have about recommended barley production practices from the University of Idaho. Finally, we look forward to hearing from you, as the feedback and contributions from all growers, county extension personnel, consultants, and barley industry stakeholders are crucial for creating a productive research and extension program to address the current needs of Idaho growers. **Email: cwrogers@uidaho.edu Twitter: @UIbarley**

Idaho Barley All Stars Award presented at annual University of Idaho Extension Conference

Pictured above from left to right: Reed Findlay, Steve Harrison, Jon Hogge, Ben Eborn and Joel Packham.

On April 1 the Idaho Barley Commission awarded our highest recognition - **Idaho Barley All Stars Award** - to six County Extension Educators and one Regional Agricultural Economist for their exceptional service in educating grain producers on new federal farm programs available under the 2014 Farm Bill. In our 28 year history, the IBC has only awarded this honor to four other individuals, including the first Idaho Barley All Stars recipient Bill Coors, who established malting barley contracts in Idaho in 1969 and helped build the Idaho barley industry into the largest producing state in the U.S. today.

Our 2015 recipients include: Ben Eborn, Teton County; Jon Hogge, Jefferson Co.; Reed Findlay, Bannock & Bingham Counties; Steve Harrison, Caribou County; Joel Packham, Cassia County; and Ken Hart, Lewis County. All total, this team of extension educators conducted 22 workshops stretching from Malad to Bonners Ferry and hundreds of one-on-one farmer consultations from December through March, assisting more than 2,000 producers across Idaho. Paul Patterson, regional agricultural economist based in Idaho Falls, also was **recognized with this award** for his long and distinguished service in economic analyses for grain, potato and sugar beet producers.

Barley Yellow Dwarf Virus continued from page 1

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Symptoms in barley – we are seeing extensive yellowing of leaves that are consistently and uniformly distributed throughout the affected fields. Reddening may be present but more often we are seeing extensive yellowing of the upper portions of leaves. NOTE the yellowing does not always include the whole leaf, but often just the upper portion of the leaf. Dwarfing may or may not be obvious with the symptoms. **Symptoms in wheat** are similar, but more frequently we also see the reddening of leaves. There are entire fields that look only yellow from a distance, but up close you may see leaves with reddening.

How do we determine the extent of yield loss? This is a very difficult question. Much of the previous research relies on data from the mid-west where incidence is about 10 – 40% of the plants in the field. It is unusual to have as widespread damage where 85-99% of the plants in the field are showing symptoms. Also remember that visual symptoms alone may UNDERESTIMATE the actual incidence in the field.

Based on our experience from the 2013 southern Idaho epidemic and from published research, we are providing the following observations: In many fields, 20-30% yield loss will be common and in fact may be optimistic. In 2013, we saw yield losses greater than 50% and as high as 70% in heavily damaged fields. Published reports indicate that for every 1% increase in incidence, there will be a decrease of 0.25 bu/A. (Australian paper: McKirdy, S.J., R.A.C. Jones, and Nutter, F.W., Jr.) Incidence is simply the presence of the disease – any plant showing symptoms. This does not consider severity of the disease on those affected plants. Other factors to consider:

- BYD will decrease yield, test weight, plumps. Therefore, winter barley for malt, even with low percentages of infection (less than 30%), may not make malt quality!
- Early spring water stress will exacerbate the losses. The ability to mitigate damage depends on nitrogen and water.
- There **are differences in varieties for susceptibility**. While at this point we do not have good data on the yield of susceptible varieties under high BYD pressure, we will be able to rate the varieties we currently grow for susceptibility in the UI Extension variety trials planted at various locations (Kimberly, Rupert, Aberdeen, Ririe and Idaho Falls).
- Insecticidal seed treatments do help to reduce BYD. With long falls, seed treatments will not last long enough to protect earlier planted cereals. In this instance, fields planted late with emergence from October 7 – 10 or later show no symptoms of infection.

Recommendations for severely affected fields: Destroy severely affected crops (dead plants do not harbor the virus). Treat infected grain by spraying with Roundup or other burn down chemicals. Plow or disc down the crop four to five days after applying Roundup. Wait at least two to three weeks after spraying before planting a spring crop. If you replant with spring grain, be aware that replanting quickly can result in an increase in additional soilborne disease problems (like crown rots, take-all, Pythium seedling damping off, Rhizoctonia, etc) in newly planted wheat or barley unless you give enough time for the winter grain to decompose. Leaving infected crops in place (including infected strips for crop adjustment purposes) can result in a disease reservoir that will serve as a source of the virus for newly planted spring crops. This is termed a “green bridge” where overlapping generations of crops result in transfer of diseases to the newer crop. Such practices will maintain BYD as an issue in future cropping cycles.